

(11) **EP 0 871 337 A2** 

(12)

## **EUROPEAN PATENT APPLICATION**

(43) Date of publication:

14.10.1998 Bulletin 1998/42

(51) Int Cl.6: H04N 7/52, H04N 7/32

(21) Application number: 98302423.3

(22) Date of filing: 30.03.1998

(84) Designated Contracting States:

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

Designated Extension States: AL LT LV MK RO SI

(30) Priority: 07.04.1997 GB 9707037

(71) Applicant: NDS LIMITED
West Drayton, Middlesex UB7 ODQ (GB)

(72) Inventors:

- Bock, Alois Martin
   Eastleigh, Hampshire SO50 4PF (GB)
- Jordon, John Paul Bournemouth, Dorset BH8 8NU (GB)
- (74) Representative: Anderson, Angela Mary NDS Limited, Stoneham Rectory Stoneham Lane Eastleigh, Hampshire SO50 9NW (GB)

## (54) Method and apparatus for modifying a digital data stream

(57) This invention relates to improvements in controlling the decoder buffer occupancy, particularly in relation to, but not exclusively to, switching between compressed bitstreams.

This invention provides a method of modifying a digital bitstream 11 to be transmitted through a decoder 14 having a buffer 15. An expected level of buffer occupancy is determined for a point in the digital bitstream 11 and the digital bitstream 11 is modified at that point to

change the buffer occupancy to a second level. The second level may be determined from a second digital bitstream 12. One advantage of this method is that the occupancy of the buffer 15 can be adjusted to match the buffer requirements of the second bitstream 12 before switching to the second bitstream 12.

The invention provides method and apparatus for improving the decoder buffer management during switching between bitstreams.

